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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/926,447 | 10/21/2002 | Thomas Grassl | GRAS3004/JEK | 4692 |
| 23364 | 7590 | 05/03/2006 | EXAMINER | |
| BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314 | | | SELLS, JAMES D | |
| | | ART UNIT | PAPER NUMBER | |
| | | 1734 | | |

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/926,447 | GRASSL ET AL. |
| | Examiner James Sells | Art Unit 1734 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 February 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 18,20-22,27,30-33,35-39 and 42-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 18,20-22,27,30-33,35-39 and 42-51 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 18, 27, 33 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lang et al (US Patent 6,046,073) in view of Grupen-Shemansky (US Patent 5,268,065).

Lang discloses a process for making semiconductor chips and the chips made thereby. As shown in Fig. 1, a thinned semiconductor chip 1 is arranged on contact surfaces 2 of a leadframe. Electrical connections are formed between contact studs 3 and contact surfaces 2. See col. 2, line 63 through col. 3, line 30. At col. 2, lines 1-15, Lang discloses that the assembly is in normal use in a smart card assembly. In addition, it appears from Fig. 1, that chip 1 is applied to the external surface of the card in the manner claimed by the applicant.

However, Lang does not disclose thinning the chip from the back side as claimed by the applicant. Regarding this difference, the applicant is directed to the reference of Grupen-Shemansky.

Grupen-Shemansky discloses a method for thinning a semiconductor wafer. As shown in the figures, back side 13 of semiconductor wafer 11 undergoes a mechanical grinding in order to thin the chip. See col. 2, line 56 through col. 3, line 3.

It would have been obvious to one having ordinary skill in the art to thin a chip from the back side, as taught by Grupen-Shemansky, in the process of Lang, in order to provide smaller, more compact chips.

3. Claims 20-22, 30-32, 35-38 and 42-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lang et al in view of Grupen-Shemansky as described above in paragraph 2 in view of Kohama et al (US Patent 6,412,701).

Kohama discloses a method for incorporating a chip into a smart card. This method involves applying the chip to a surface of the smart card externally. As shown in Figs. 8-9, chip 1 with conductive paths or coils 2 is "hot pressed" in recesses 15 with its front side pointing outside to the surface of the smart card. See col. 12, lines 4-18 and 46-51.

It would have been obvious to one having ordinary skill in the art to hot press the chip into a cavity, as taught by Kohama, in the method and article of Lang in order to produce smart cards with desired physical configurations. In addition, without the disclosure of unexpected results, it is the examiner's position that the protective lacquer and printing technique are well known and conventional in the art and would have been obvious to employ in the method and article of Lang as described above in order to provide desired protection and to facilitate production of the articles.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 1734

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 20, 30, 35 and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 depends from canceled claim 19.

Claim 30 depends from canceled claim 28.

Claim 35 depends from canceled claim 34.

Claim 42 depends from canceled claim 40.

Response to Arguments

6. Applicant's arguments with respect to claims 18, 20-22, 27, 30-33, 35-39 and 42-51 have been considered but are moot in view of the new ground(s) of rejection.

Telephone/Fax

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Sells whose telephone number is (571) 272-1237. The examiner can normally be reached on Monday-Friday between 9:30 AM and 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached at (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.



JAMES SELLS
PRIMARY EXAMINER
TECH. CENTER 1700